

In the Claims:

1 – 15. (Canceled)

16. (Previously Presented) A method for producing a substance comprising culturing cells that produce said substance in the presence of a nutrient media that results in a degree of glucose limitation (DGL), wherein the DGL is larger than the degree of glucose limitation needed for maintenance of the cell ($DGL_{\text{maintenance}}$) and the DGL ratio of the currently observed specific consumption rate to the maximum known specific consumption rate for said cells is ≤ 0.5 .

17. (Previously Presented) The method of claim 16, wherein the DGL is ≤ 0.4 .

18. (Previously Presented) The method of claim 16, wherein the DGL is ≤ 0.3 .

19. (Previously Presented) The method of claim 16, wherein the nutrient media comprises glucose and further wherein the amount of glucose is not more than 50% of that which can be maximally consumed by the maximum expected cell count without glucose limitation.

20. (Previously Presented) The method of claim 19, wherein the amount of glucose is not more than 35% of that which can be maximally consumed by the maximum expected cell count without glucose limitation.

21. (Previously Presented) The method of claim 16, wherein the cells are selected from the group of cell lines comprising CHO such as CHO-K1, BHK such as BHK-21, hybridoma, myeloma cells such as NS/O and other mammalian cells.

22. (Previously Presented) The method of claim 16, wherein the produced substances are proteins or polypeptides.

23. (Previously Presented) The method of claim 21, wherein the produced protein or polypeptide substances comprise fusion proteins, MUC1-IgG2a, MUC2-GFP-C-term, EPO, interferons, cytokines, growth factors, hormones, PA, immunoglobulins, fragments of immunoglobulins or other glycoproteins.

24. (Previously Presented) The method of claim 19, characterized in that a glucose-containing medium is used which is not limiting with regard to other nutrient components before glucose limitation occurs.

25. (Previously Presented) The method of claim 24, wherein the glucose is fed separately from other nutrient media.

26. (Previously Presented) The method of claim 16, wherein the culture is carried out in a pH range of 6.7-7.7.

27. (Previously Presented) The method of claim 16, wherein the cells are cultured under a fed-bath or perfusion process.